

VOROB'YEV. V.V.

Present state and basic problems of the population geography of
Siberia and the Far East. Dokl. Inst. geog. Sib. i Dal'. Vost.
no. 2:56-65 '62.

(MIRA 18:10)

VOROB'YEV, V.V.

Development of taiga areas and the problem of their settlement.
Dokl. Inst. geog. Sib. i Dal', Vost. no.7:58-64 '64. (MIRA 18:10)

VOROB'YEV, V. V.; STEPANOV, M.N.

Moscow - Building

New appearance of Moscow. Geog. v shkole no. 5, 1952.

Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

VOROB'YEV, V. V., STEPANOV, M. N.

Russia - Economic Conditions - Maps

Map of the industrialization of the U.S.S.R., Geog.v shkole no. 1, 1953.

Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

VOROB'YEV, V.V.; STEPANOV, M.N.

Books about the Altai Territory. Reviewed by V.V.Vorob'ev,
M.N.Stepanov. Geog.v shkole no.2:76-78 Mr-Apr '54. (MIRA 7:2)
(Altai Territory--Description and travel)

STEPANOV, M.N.; VOROB'YEV, V.V.

Local publications devoted to individual towns. Reviewed by
M.N. Stepanov, V.V. Vorob'ev. Vop.geog. no.38:266-270 '56.

(MLRA 9:9)

(Cities and towns --Book reviews)

VOROB'YEV, V.V.

"Economic geography" [In English]. Reviewed by V.V.Vorob'ev. Izv.
Vses.geog.ob-va 87 no.1:86-90 Ja-F '55. (MIRA 8:4)
(United States--Economic geography--Periodicals)

VOROB'YEV, V.Y.

Principal changes in the geography of urban developments in the south of Eastern Siberia during the last 40 years (1917-1957).

Nauch.dokl.vys.shkoly; geol.-geog. nauki no.2:230-234 '58.

(MIRA 12:2)

1. Moskovskiy universitet, geograficheskiy fakul'tet, kafedra ekonomicheskoy geografii SSSR.

(Siberia, Eastern--Cities and towns)

BLINKIN, A.M.; VOROB'YEV, V.V. [Vorobyov, V.V.]

Diffusion of iron in zirconium. Ukr. fiz. zhur. 9 no.1:91-
95 Ja '64. (MIRA 17:3)

1. Khar'kovskiy gosudarstvennyy universitet.

Cand
YOROB'YEV, V.V.: Master Geogr Sci (diss) -- "The towns of the southern portion of eastern Siberia (Historical-geographical outline)". Moscow, 1958.
Moscow State U imeni M.V. Lomonosov), 150 copies (KL, No 1, 1959, 115)

BUYANTUYEV, B.R.; VOROB'YEV, V.V.

Urban type settlements of Buryat-Mongolia. Kraeved.sbor.
no.4:42-71 '59. (MIRA 13:7)
(Buryat-Mongolia--Cities and towns)

VOROB'YEV, V.V.

Types of urban settlements in southeastern Siberia, Vop.geog.
no.45:99-112 '59. (MIRA 12:5)
(Siberia, Eastern--Cities and towns)

SOCHAYA, V.B., otv. red.; KROTOV, V.A., prof., otv.red.; GERASIMOV, I.P.,
akad., red.; POKSHISHEVSKIY, V.V., prof. red.; RIKHTER, G.D.,
prof., red.; VOROB'YEV, V.V., kand.geogr.nauk, red.; KUDINOVA,
L.I., red.; KHMEL'NITSKAYA, Ye.S., red.; SEPPING, H.G., red.;
PECHERSKAYA, T.I., tekhn.red.

[Geographical problems of Siberia and the Far East; results of
the First Scientific Conference of the Geographers of Siberia and
the Far East] Problemy geografii Sibiri i Dal'nego Vostoka; itogi
Pervogo nauchnogo soveshchaniya geografov Sibiri i Dal'nego Vosto-
ka. Irkutsk, Irkutskoe knizhnoe izd-vo, 1960. 133 p.

(MIRA 14:5)

1. Akademiya nauk SSSR. Sibirskoye otdeleniye. Institut geografii
Sibiri i Dal'nego Vostoka. 2. Chlen-korrespondent AN SSSR (for
Sochava)

(Siberia--Geography)

(Soviet Far East--Geography)

VOROB'YEV, V.V., KOSMACHEV, K.P.

First conference of geographers of Siberia and the Far East.
Izv.Sib.otd.AN SSSR no.1:147-148 '60. (MIRA 13:7)
(Geography—Congresses)

VOROB'YEV, V.V.
BARANSKIY, N.N.

"Cities in the southern part of Eastern Siberia"; historical and
geographical studies by V.V. Vorob'ev. Reviewed by N.N. Baranskiy.
Geog. v shkole 23 no. 4: 56-58 Ag '60. (MIRA 13:10)
(Siberia, Eastern—Cities and towns)
(Vorob'ev, V.V.)

VOROB'YEV, V.V.

Some problems of the economic geography of Irkutsk. Trudy Vost.-
Sib. fil. AN SSSR. no.32:61-79 '60. (MIRA 14:4)
(Irkutsk--Economic conditions)

VOROB'YEV, V.V.; NEDESHEV, A.A.

Influence of peculiarities in the development of Chita upon the
present-day features and functions of the city. Trudy Vost.-Sib.
fil. AN SSSR no.32:87-95 '60. (MIRA 14:4)
(Chita--Economic conditions)

VOROB'YEV, V.V.; KRUCHININA, L. Yu.

Methodology of preparing maps showing the distribution of
population in Irkutsk Province. Trudy Vost.-Sib. fil AN
SSSR no.32:130-135 '60. (MIRA 14:4)
(Irkutsk Province—Population—Maps)

VOROB'YEV, V.V.

Characteristics of natural conditions in central Yakutia
from the point of view of agriculture as illustrated by
the Anga Valley. Biul.MOIP.Otd.geol. 35 no.1:131
Ja-F '60. (MIRA 13:7)

(Anga Valley--Physical geography)
(Agriculture)

POKSHISHEVSKIY, V.V., prof., doktor geogr. nauk, otv. red.; VOROB'YEV,
V.V., kand. geogr. nauk; MEYEROVICH, O.V., red. izd-va;
PRUSAKOVA, T.A., tekhn. red.

[Geography of the popylation of Eastern Siberia] Geografiia nase-
leniia Vostochnoi Sibiri. Moskva, Izd-vo Akad.nauk SSSR, 1962.
162 p. (MIRA 15:7)

1. Akademiya nauk SSSR. Sibirskoye otdeleniye. Institut geografii
Sibiri i Dal'nego Vostoka.
(Siberia, Eastern--Pcpulation)

VOROB'YEV, V.V.

Research work on the geography of Siberia and the Far East.
Sib.geog.sbor. no.1:231-238 '62. (MIRA 16:2)
(Siberia—Geographical research)
(Soviet Far East—Geographical research)

KLEPOV, I.L.; VOROB'YEV, V.V.

"Geographical problems of Yakutia." Reviewed by I.L.Kleopov, V.V.
Vorob'ev. Izv. Vses. geog. Ob-va 94 no.3:263-265 My-Je '62.
(MIRA 15:7)

(Yakutia--Geography)

L 08168-62 EWT(m)/EWP(t)/ETI IJP(e) JD/JG

ACC NR: AP6024861

SOURCE CODE: UR/0056/66/051/001/0032/0037

AUTHOR: Finkel', V. A.; Smirnov, Yu. N.; Vorob'yev, V. V.

ORG: Physicotechnical Institute, Academy of Sciences Ukrainian SSR (Fiziko-technical Institute Akademii nauk Ukrainiskoy SSR)

TITLE: Crystal structure of terbium at 120 -- 300K

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 51, no. 1, 1966, 32-37

TOPIC TAGS: terbium, low temperature research, crystal lattice structure, x ray diffraction analysis, phase transition, paramagnetism, antiferromagnetism

ABSTRACT: This is a continuation of an earlier study of the crystal structure of rare earth metals (REM) (ZhETF v. 49, 1774, 1965), which was devoted to gadolinium. The present study was devoted to 99.5% pure polycrystalline terbium. The low-temperature x-ray diffraction procedure employed was also described by the authors earlier (ZhETF v. 47, 84, 1964 and v. 49, 1077, 1965). The tests were made at temperatures 120 -- 300K. The results show that at 234K there a λ -anomaly of the coefficient of linear expansion, connected with the transition of the paramagnetic terbium into the antiferromagnetic state. At 223K a jump in the atomic volume is observed, signifying that the transition of the antiferromagnetic helicoidal structure into a ferromagnetic one (with colinear ordering) is a first-order transition. A small rhombic

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L 08168-67

ACC NR: AP6024861

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distortion of the hexagonal crystal structure of the terbium lattice takes place at 223K. Slight discrepancies observed between the measured values of the transition temperatures and the latest published data may be connected with difference in the purity of the investigated terbium. Orig. art. has: 4 figures

SUB CODE: 20/ SUBM DATE: 31Jan66/ ORIG REF: 006/ OTH REF: 013

Card 2/2 nst

ACC NR: AP7000134

SOURCE CODE: UR/0115/66/000/011/0085/0085

AUTHOR: Al'bikov, Z. A.; Vorob'yev, V. V.; Shuvalov, R. B.

ORG: none

TITLE: A converter of time to amplitude

SOURCE: Izmeritel'naya tekhnika, no. 11, 1966, 85

TOPIC TAGS: digital analog converter, electronic circuit

ABSTRACT: A time-to-amplitude ($t \rightarrow A$) converter is described. Time-displaced input pulses u_1 and u_2 are applied to two monostable tunnel diode flip-flop circuits (TD_1 and TD_2) at the input of the converter (see Fig. 1.) The output pulses of these

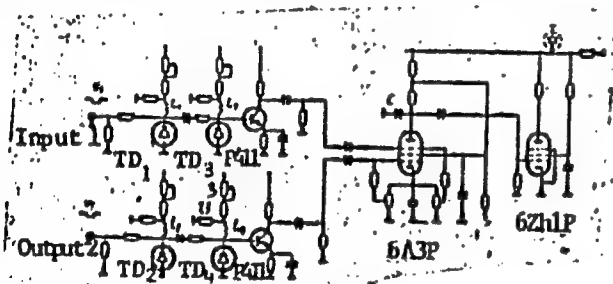


Fig. 1. Schematic diagram of the time-to-amplitude converter

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ACC NR: AP7000134

flip-flops are of equal amplitude and time duration. Pulse shapers containing tunnel diodes TD_3 and TD_4 extend the working amplitude range of the converter. The two pulses are then amplified by the $P411$ transistors and applied to the grids of the 6A3P tube. As long as the two pulses overlap, capacitor C (18 nf) in the anode circuit of the tube 6A3P linearly discharges through the tube. The voltage change across capacitor C is amplified by tube 6Zh1P and is proportional to the time shift between the two input pulses. The converter has an input resolution of 40×10^{-12} sec (at mid-height of the input pulses) which stays constant for input frequencies between 50 and 100 kc; it was used for measuring input pulses in the amplitude range from 1 to 90 with durations of $(3-100) \times 10^{-9}$ sec. Orig. art. has: 2 figures. -

SUB CODE: 09/ SUBM DATE: 28Aug65/ ORIG REF: 001/ OTH REF: 001/ ATD PRESS: 5107

Card 2/2

ACC NR: AP6032475 SOURCE CODE: UR/0056/66/051/003/0786/0790

AUTHOR: Finkel', V. A.; Vorob'yev, V. V.

ORG: Physicotechnical Institute, AN UkrSSR (Fiziko-tehnicheskiy institut AN UkrSSR)

TITLE: Crystal structure of dysprosium at 77—300K

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 51, no. 3, 1966, 786-790

TOPIC TAGS: crystal, crystal structure, crystal lattice, crystal lattice structure, dysprosium

ABSTRACT: The crystal structure of dysprosium is studied by the low-temperature x-ray diffraction method at temperatures between 77 and 300K. It is shown that at 178K, a negative λ anomaly of thermal expansion coefficients occurs which is related to a phase transition of the second kind similar to the helicoidal antiferromagnetism—paramagnetism type of transition. A discontinuity in the crystal lattice period and atomic volume at 85K and also the appearance of rhombic distortions are observed.

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ACC NR: AP6032475

tions of the hexagonal lattice related to an antiferromagnetism-ferromagnetism phase transition of the first kind are observed. Orig. art. has: 3 figures.
[Authors' abstract]

SUB CODE: 20/SUBM DATE: 28Apr66/ORIG REF: 007/OTH REF: 006/

Card 2/2

VOROB'YEV, Viktor Vasil'yevich; STEPANCHUK, Anatoliy Andreyevich;
MAGON, E.E., red.

[Raising calves and piglets with the use of milk substitutes] Vyrashchivanie teliat i porosiat s ispol'zovaniem zamenitelei moloka. Leningrad, Kolos, 1965. 54 p.
(MIRA 19:1)

VOROB'YEV, V.V. [Vorobiov, V.V.]

Distillation of yttrium. Ukr. fiz. zhur. 10 no.7:786-792
Jl '65. (MIRA 18:8)

1. Khar'kovskiy gosudarstvennyy universitet im. Gor'kogo.

L 9534-66 EWP(m)/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EWA(a) JD/HM
 ACC NR: AP5026293 SOURCE CODE: UR/0125/65/000/010/0052/0054

AUTHOR: Shleymovich, S. S. (Engineer); Vorob'yev, V. V. (Engineer); Rubanovich, B. B. (Engineer)
 44.55 44.55 44.55 62 56 B

ORG: [Shleymovich] Ministry of River Fleet RSFSR (Ministerstvo rechnogo flota RSFSR); [Vorob'yev] Orgenergostroy; [Rubanovich] Trast "Stal'konstruktivaya"
 44.55 44.55

TITLE: Experience in unshielded arc welding with bare alloy wire
 44.55 16

SOURCE: Avtomaticheskaya svarka, no. 10, 1965, 52-54

TOPIC TAGS: unshielded arc welding, welding technology, shipbuilding engineering, construction

ABSTRACT: Mechanized unshielded arc welding with bare alloy wire, developed in 1962 at the Ye. O. Paton Institute of Electric Welding, dispenses with the use of shielding atmospheres which is of major importance to mechanizing welding operations in shipbuilding and construction. What is more, it reduces by 35-40% the number of transverse deformations compared with manual and submerged-arc welding. The technique has been used with positive results to mechanize reinforcement-welding operations during the construction of poured-on-the-spot and precast reinforced concrete structures in the Konakovo, Kirshev and Burshtyn power stations, where it has served to markedly

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L 9534-66

ACC NR: AP5026293

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reduce the cost and time of the construction and assembling operations. The related experience shows that use of this technique to weld 100 joints of 40 mm thick reinforcement in the vertical position saves about 450 rubles and in the bottom position, 165 rubles (compared with manual welding). Mechanized unshielded arc welding has also been introduced since 1963 at the Gomel' and Astrakhen' shipyards, with similarly satisfactory results. In addition, it has been used to weld together sheets of structural metal. It is a technique that assures an increase in productivity and reduction in production cost in conditions when other methods of mechanized welding are not applicable. Orig. art. has: 3 figures, 2 tables.

SUB CODE: 11,13/ SUBM DATE: 09June65/ ORIG REF: 003/ OTH REF: 000

Beh
Card 2/2

IVANOV, V.Ye. [Ivanov, V.IE.]; VOROB'YEV, V.V. [Voroblov, V.V.];
BALENKO, E.P.

Yttrium refinement in a vacuum. Ukr. fiz. zhur. 10 no.5:
543-547 My '65. (MIRA 18:5)

1. Khar'kovskiy gosudarstvennyy universitet im. Gor'kogo.

L 5103-66 ENT(m)/EWP(t)/EWP(b) 7 IJP(c) JD/JG
 ACCESSION NR: AF5018639

UR/0185/65/010/007/0786/0792

AUTHOR: Vorobyov, V. V. (Vorob'yev, V. V.)

TITLE: Distillation of yttrium

SOURCE: Ukrayins'kyi fizychnyy zhurnal, v. 10, no. 7, 1965, 786-792

TOPIC TAGS: yttrium, distillation, rare earth element

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 22
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ABSTRACT: Further possibilities were investigated of utilizing vacuum distillation for obtaining high-purity yttrium by using a condensation column with a temperature gradient. The temperature of the column varied from 1550 to 1600C. The distilling was carried out in an electropolished stainless steel chamber in a vacuum 5×10^{-6} mm Hg. The distillation was from a tantalum crucible and the condensation was in a column with tantalum substrate. The column consisted of molybdenum and stainless steel cylinders, one inside the other, which served as radiation shields. The rate of evaporation was 6.7×10^{-5} g/cm²sec. The results show that the distillation method yields yttrium of purity 99.8 wt.% with impurity content 1.4×10^{-3} , $<2.5 \times 10^{-3}$, $<3 \times 10^{-2}$, and 1.65×10^{-2} wt.% Mg, Al, Si, and Fe, respectively, and with only traces of Ti and Ni. The rare earth impurity content was also reduced considerably, to 2.6×10^{-2} , 2.3×10^{-2} , $<5 \times 10^{-2}$, and $<5 \times 10^{-2}$ wt.% of La, Gd, Tb, Er,

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L 5103-66

ACCESSION NR: AP5018639

and Ce. A shielded condensation column with heating was also used to distill yttrium. The rate of evaporation at 1600C was 13.1×10^{-5} g/cm²sec. Analysis of the condensate obtained between 1370--1430C indicates increased Mg, Fe, and Cu content. Orig. art. has: 6 figures and 3 tables.

ASSOCIATION: Kharkivs'kyi derzhuniversytet im. O. M. Hor'koho [Khar'kovskiy gosudarstvennyy universitet im. A. M. Gor'kogo] (Khar'kov State University)

SUBMITTED: 01Sep64

ENCL: 00

SUB CODE: GC, MM

NR REF SOV: 004

OTHER: 009

Cord 2/2 *hd*

VOROB'YEV, V.V., inzh.

Shortcomings of State Standard 4598-60 for fiberboards. Der. prom.
14 no.4:8-9 Ap '65. (MIRA 18:5)

SOCHAVA, V.B.; VOROB'YEV, V.V.

Problems of the geography of the eastern regions of the R.S.F.S.R.;
results of the Second Scientific Congress of the Geographer. of
Siberia and the Far East. Sib. geog. sbor. no.3:271-318 '64.
(MIRA 18:3)

PUKHOV, Grigoriy Aleksandrovich; SYSOYEVA, Larisa Pavlovna;
VOROB'YEV, V.V., red.

[Group technology in welding] Gruppovaya tekhnologiya v
svarochnom proizvodstve. Leningrad, 1965. 28 p.
(MIRA 18:5)

SMIRNOV, G.N.; KUMYSH, A.Z.; VOROB'YEV, V.V.

[Improvement of safety equipment, dust removing ventilation, and waste removal from Ch-460-L combing machines]
Usovershenstvovanie sredstv tekhniki bezopasnosti, obespylivaiushchaia ventilatsiia i udalenie ugarov na chesal'nykh mashinakh Ch-460-L. Ivanovo, 1963. 39 p.

(MIRA 17:5)

1. Ivanovo. Vsesoyuznyy nauchno-issledovatel'skiy institut okhrany truda VTsSPS.

ck

SOCHAVA, V. B.; VOROB'YEV, V. V.

Practice in coordinating the work of the Siberian and Far Eastern
organizations of the Geographical Society of the U.S.S.R. Izv.
Vses.geog.ob-va 96 no. 2: 140-144 Mr-Apr '64. (MIRA 17:5)

ACC NR: AP6029082

SOURCE CODE: UR/0413/66/000/014/0156/0156

INVENTOR: Rubtsov, M. V.; Mikhlin, Ye. Ye.; Vorob'yeva, V. Ya.; Lobanov, D. I.;
Komarova, N. A.

ORG: none

TITLE: Preparation of 1-carbethoxymethyl-4-carbethoxypiperidine Class 12,
No. 149106

SOURCE: Izobret prom obraz tov zn, no. 14, 1966, 156

TOPIC TAGS: ~~carbethoxymethylcarbethoxypiperidine synthesis~~, ethyl isonipelate
alkylation, chloroacetic acid ester, *ALKYLATION, CARBON COMPOUND*

ABSTRACT: To increase the yield and to simplify the preparation of the title
compound by alkylation of ethyl isonipellate (I) with ethyl chloro-
acetate, the hydrochloride of I is alkylated in anhydrous ethanol in
the presence of Na_2CO_3 . [WA-50; CBE No. 11]

SUB CODE: 07/ SUBM DATE: 05Sep61

Card 1/1

MANUYLOVA, M.M.; VOROB'YEV, V.Ye.; OSTROUMOV, G.V.

Pegmatites in the Bol'shaya Minya Valley and their mica potential.
Trudy Lab. geol. dokum. no.11:111-116 '60. (MIRA 14:1)
(Bol'shaya Minya Valley--Pegmatites)
(Bol'shaya Minya Valley--Mica)

VOROB'YEV, V. E.

Investigation of human blood preserved in sucrose solution. V. E. Vorob'yev. J. Physiol. (U. S. S. R.) 26, 714-14(1939); Chem. Zentr. 1939, II, 3710.—An app. is described with which it is possible to study the properties of preserved blood. With the use of this app. a relatively rapid disintegration of the leucocytes in the sediment of sucrose-citrate blood (at 20°) was observed. Only a slight decrease in the sugar content of the plasma was detected after 6-25 days. A considerable part of the sugar went into the erythrocytes, where it could be detected, so that only a slight change in the total sugar content over 25 days was observed.

M. G. Moore

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

FROM SOURCE

REAST ONE ONE SIX

REAST ONE ONE SIX

G/005/60/000/010/005/006
B015/B060

AUTHORS: Mchedlov-Petrosyan, O. P., Vorob'yev, Y. L.

TITLE: Prospects of Application of Some Natural Magnesium
Hydrosilicates in Industry

PERIODICAL: Silikattechnik, 1960, No. 10, pp. 466-472

TEXT: The present article has been translated by Dr. G. Wagner, Berlin. The authors discuss the structure of serpentinite along with its binding properties and mention papers by Syromyatnikov, Medvedev (tests conducted at the asbestos-enriching plant of the Association "Soyuzasbest"), Oganessian, Budnikov, and Bereshnoy (Ref. 6), Vernadskiy (Ref. 12), Roginskiy (Ref. 23), Belov (Refs. 39-41), Sobolev (Ref. 42), Zhuravlev (Ref. 47), Bernal, Rebinder, Ratinov, and others. Figs. 7 and 8 illustrate the authors' idea of a simplified scheme of the modifications undergone by serpentinite on heating. This scheme permits establishing the correlation among partial dehydration, presence of lattice distortions, and appearance of activity. The re-arrangement of the

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Prospects of Application of Some Natural
Magnesium Hydrosilicates in Industry

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tetrahedra on the transition from antigorite to forsterite can take place in three ways, viz., by slight rotation around the symmetry axis of the antigorite tetrahedron; from two peak oxygen atoms and the central OH ion from a destroyed tetrahedron; by the displacement of base oxygen atoms from destroyed tetrahedra and transition of the OH ion to O at the vertex. The scheme offered here differs from those of other authors on related minerals by the presence of a stage of active state. The region of formation of this metastable transition state appears during the heating process prior to the complete disappearance of the antigorite crystal lattice and the formation of forsterite in the range of 600-700°C for serpentinite, and 700-750°C for precious serpentinite, or, in other words, on heating to the temperature of the maximum endothermal effect (Fig. 10, thermogram). Potentiometric investigations of the hydration process in serpentinite cement have shown that a pH drop may be observed in the period of active hydration (Table 1). In the back-hydration of the cement (dehydration of the intermediate) there occurs

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Magnesium Hydrosilicates in Industry

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under the action of OH ions a crystal-chemical dispersion of the cement granules of the medium in particles of colloidal size as well as a structure formation on their basis and a crystallizing intergrowth of resulting aggregates, in which connection a partial superficial dissolution of the binding agents, formation of oversaturated solutions, and crystallization are possible. The authors base on their study of the properties of serpentinite cement to conclude as follows: the energy of the crystal lattice of binding agents must be considerably larger than the energy of the crystal lattice of the corresponding hydrates. The excess free energy from mineral formations possessing binding agent properties is caused by the presence of lower or degenerate coordinations of active structure cations. The pH is of greatest importance in the development of binding agent properties. Hydrates must form stratified crystals. Next, the authors supply data regarding the properties and the technology of serpentinite cement. A characteristic of the latter is that the rock is ground before burning, so that insufficient or excess burning is avoided and great economy is achieved. Mention is made of building materials on the basis of serpentinites, such as concrete and

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Prospects of Application of Some Natural
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mortar, road surfaces and other coatings, construction units and
ornamental objects. The use of serpentinites as raw materials for the
chemical industry and the production of refractories is also discussed.
Akunov, Bazhenov, and Sal'nikova, Geriyeva, Desov are mentioned in the
text. There are 11 figures, 1 table, and 60 references: 42 Soviet.

Card 4/4

DoRob'yev, Ya. G.

827/553
827/7-4-3

PLANE 1 BOOK INFORMATION

Abkhazian, 1952. Laboratory of aeromagnetics

Trudy, tom 8: Materialy VII Vsesoyuznogo nauchnoissledovaniya aeromagnitnykh poletov, 25 noyabrya - 1 dekabrya 1956 g. (Materials of the 7th All-Union Interdepartmental Conference on Aerial Surveying, 25 November - 1 December 1956) Moscow, Gosgeolizdat, 1959. 300 p. 5,000 copies printed.

M. of Publishing House: V. G. Filatov; Tech. Ed.: O. A. Gureva; Editorial Commission: E. O. Kall, Corresponding Member, Academy of Sciences USSR; A. A. Logachev, V. P. Kirsantchenko (Geog. Sci.), and E. N. Shchegolev.

NOTES: This publication is intended for geophysicists, geologists, geomorphologists, and other scientific and technical personnel concerned with aerial photography.

CONTENTS: This issue of the Transactions of the Laboratory of Aerial Survey Methods contains the second part of materials presented at the 7th All-Union Interdepartmental Conference on Aerial Surveying which took place in Leningrad, November 25 through December 1, 1956. Articles treat problems dealing with the execution and application of aerial survey methods in geological, geomorphological, and geophysical investigations. Special attention is directed to aerial survey methods in geological and geomorphological mapping and geophysical surveys under different conditions. The techniques of joint airmobile aerial photography and aerial photography are described. References accompany individual articles.

TABLE OF CONTENTS:

1. Khavron, A. I. [All-Union Scientific Research Institute of Geophysical Prospecting Methods]. Results of Aerial and Aerial-Aerogeophysical Combined (Radiometric and Magnetometric) Method of Prospecting 45

2. Cherny, V. P. [Institute-Independently Institute aeromagnetic magnetism - Scientific Research Institute of Territorial Magnetism]. Synthesis [Small-Scale] Map of Magnetic Anomalies and Methods of Using the Aeromagnetic-Survey Data to Absolute [Reference] Values of the Magnetic Field Intensity 62

3. Dumov, V. M. [All-Union Scientific Research Institute of Geophysical Prospecting Methods]. Techniques and Results of a Regional Aeromagnetic Survey of the Northwestern Russian Plateau [In the Study of the Magnetic Anomalies] Using Map-Scale Correlation Tables [Aerial Photography] 67

4. Shala, P. A. [Great Siberian Expedition - Siberian Trust for Oil Prospecting by Geophysical Methods]. Aeromagnetic Survey of Siberia and Their Evaluation for Geological Purposes 72

5. Rudakov, V. B. [Geologically geophysical trust - Black Geophysical Prospecting Trust]. Results of Integrated Aerogeophysical Exploration in Certain Regions of Kazakhstan 77

6. Shalagin, O. B. [All-Union Scientific-Research Institute of Geophysical Prospecting Methods]. Results From the Aeromagnetic Survey of Caspian Region 80

7. Trubnyy, M. G. [Geophysical geophysical trust - Western Geophysical Prospecting Trust]. Preliminary Results of the Aeromagnetic Survey in the Eastern Part of Turkmenistan Carried Out in Connection With the Exploration of Oil-Bearing Structures 89

8. Shchegolev, E. N. [All-Union Scientific-Research Institute of Geophysical Prospecting Methods]. Application of Aerial-Survey Methods and Equipment to Geophysical Oil Prospecting 93

9. Shalagin, O. B., O. B. Druyer, and A. A. Shchegolev [Laboratory of Aerial-Survey Methods, Academy of Sciences, USSR]. An Integrated [Combined] Use of Aerial Photography and Aerogeophysical Prospecting in Geological Explorations 99

AVIATION: Library of Congress

Card 10/10

10/04/00
7-08-00

VOROB'YEV, Ye.

Effect of labor turnover on production. *Biul.nauch.inform.:* trud.
zar.plata 4 no.6:26-29 '61. (MIRA 14:6)
(Moscow—Automobile industry—Production standards)

VOROB'YEV, Ye.

Effect of technological innovations on the increase in labor
productivity. Sots. trud 6 no.8:69-72 Ag '61. (MIRA 14:8)
(Technological innovations) (Labor productivity)

SOV/146-58-4-7/22

9(2,3)
AUTHOR:

Vorob'yev, Ye.A.

TITLE:

The Probability of Obtaining a Given Super-High Frequency Antenna Directivity Pattern

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy, Priborostroyeniye, 1958, Nr 4, pp 36-44 (USSR)

ABSTRACT:

Imperfections in the manufacture of antennas lead to deviations of the actual antenna radiation characteristics from the calculated values. The actual antenna directivity pattern will become some approximation to the calculated one. This problem is important for antenna systems in the super-high frequency range in which the maximum permissible tolerance of the series production is already commensurable with the wave length. The influence of manufacturing imperfections on the radiation of certain super-high frequency antennas were considered in a number of foreign papers /Ref 1,2,3, 4,5/. These papers contain long and complicated calculations which produce with a known approximation an estimation of the radiation characteristics and the

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SOV/146-58-4-7/22

The Probability of Obtaining a Given Super-High Frequency Antenna Directivity Pattern

directivity pattern in particular. This paper is the first attempt made for obtaining an approximated solution of the problem of the directivity pattern. The author shows that the relative tolerance of the series production provides with a certain probability the required antenna radiation pattern for radiating co-phased openings with dimensions considerably greater than λ , apart of the dependence of the antenna type. This is achieved by the analysis of the actual directivity pattern under consideration of random deviations in the real phase front in the opening plane. It may be assumed that manufacturing inaccuracies lead to phase and amplitude errors of the field in the radiating aperture. When determining the field in a considerably distance of the antenna, the principle error is caused by the phase deviation, whose influence is considered in this paper as a function of the tolerance. As the manufacturing tolerance is known, then there is a certain probability that ΔV may be found as

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a function of b (maximum possible lag or advance of the element center in regard to the phase surface). Knowing the theoretical amplitude-phase characteristics of the antenna, with the same degree probability, the deviation of the actual directivity pattern from the calculated value may be determined. The connection between the possible phase deviation of a phase front element and a manufacturing tolerance may be established by the root-mean-square deviation. The author derives two equations (26) and (33) which facilitate not only an estimation of the real antenna field in the main direction and for the lobes with a known manufacturing tolerance E_{np} , but they also provide the possibility to anticipate the possible percentage of rejects in the series production by selecting the magnitude X

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$$-N(06)^{-20} \log \left[\sqrt{1 - x \cdot p \cdot \sin \left(\frac{2\pi}{x} E_{otn.} \right)} \right]$$

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The Probability of Obtaining a Given Super-High Frequency Antenna Directivity Pattern

$$N_{\lambda, 60K.(\theta\phi)} = N_{T, 60K.(\theta\phi)} + \left| N_{T, 60K.(\theta\phi)} + \right. \\ \left. + 20 \log \sqrt{\frac{4\pi \cdot S \cdot x \cdot p^2 \cdot \sin \left(\frac{4\pi}{x} E_{\text{otn}} \right)}{\lambda^2}} \right|$$

where $N_{\lambda, 60K.(\theta\phi)}$ is the actual level of lateral antenna radiation (in decibels), $N_{T, 60K.(\theta\phi)}$ is the theoretical level of antenna radiation. There are 5 diagrams and 8 references, 3 of which are Soviet and 5 English.

ASSOCIATION: Leningradskiy institut tochnoy mekhaniki i optiki
(Leningrad Institute of Precision Mechanics and Optics)

SUBMITTED: July 10, 1958

Card 4/4

VOROB'YEV, Ye.A., aspirant

~~Determining~~ Determining production tolerances for slot antennas. Izv.
vys.ucheb.zav.; prib. no.5:64-68 '58. (MIRA 12:6)

1. Leningradskiy institut tochnoy mekhaniki i optiki.
(Radio--Antennas)

67473

SOV/146-2-4-18/19

~~9(1)~~ 9,1000

AUTHOR: Vorob'yev, Ye.A., Aspirant

TITLE: The Design of a Printed Antenna²⁵ With a Conical Radiation Pattern

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, 1959, Nr 4, pp 149-151 (USSR)

ABSTRACT: A new printed antenna (Figure 1) for three-centimeter wave lengths is described. It represents a regular cylindrical cavity whose diameter is far bigger than the wave length and whose height is commensurate with the wave length. The upper and lower walls of the cylinder are made of electroconductive material. Annular radiation slots are cut into the upper wall; they are symmetrical with the cylinder axis and concentric. The cylindrical-wave exciter is in the center of the lower wall. The new antenna differs from other high-directional printed antennas [Reference

Card 1/2

67473

SOV/146-2-4-18/19

The Design of a Printed Antenna With a Conical Radiation Pattern

1,27 by its simplicity. It can be used in complex radio equipment for different purposes. This article was recommended by the Kafedra radioperedayushchikh i radiopriyernykh ustroystv (The Chair of Radio-Transmitting and Radio-Receiving Devices). There are 2 photographs and 2 English references.

ASSOCIATION: Leningradskiy institut tochnoy mekhaniki i optiki
(The Leningrad Institute of Precision Mechanics and Optics).

SUBMITTED: March 14, 1959. 4

Card 2/2

67474

SOV/146-2-4-19/19

~~9(1)~~ 9,1000

AUTHOR: Vorob'yev, Ye. A., Aspirant; Petrov, Ye. A.,
Engineer; Tennison, G.G., Engineer; Filippov, N.N.,
Senior Instructor

TITLE: An Installation for Measuring and Automatically Re-
cording Directional Patterns of Super-High-Frequency
Antennas,

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroye-
niye, 1959, Nr 4, pp 152-154 (USSR)

ABSTRACT: In 1958-59, under the supervision of Senior Instructor
N.N. Filippov, the authors developed a high-accuracy
installation automatically recording the directional
patterns of super-high-frequency antennas. The in-
stallation is shown in a diagram (Figure 1) and a pho-
tograph (Figure 2). For continuous automatic recor-
ding, the modernized "EPP-09"/automatic recorder is
used, whose recording tape moves with a velocity of
60 to 20 000 mm/hour. The equipment can be used to
measure the recorded directional patterns for adjusting
and regulating antenna test units in laboratories as

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67474

SOV/146-2-4-19/19

An Installation for Measuring and Automatically Recording Directional Patterns of Super-High-Frequency Antennas

well as in the open air. This article was recommended by the Kafedra radiopriyemnykh i radioperedayushchikh ustroystv (The Chair of Radio-Transmitting and Radio-Receiving Devices). There is 1 diagram, and 1 photograph.

ASSOCIATION: Leningradskiy institut tochnoy mekhaniki i optiki
(The Leningrad Institute of Precision Mechanics and Optics).

SUBMITTED: July 29, 1959.

Card 2/2

VOROB'YEV, Ye. A.

S/146/60/003/01/016/016
DOC2/DOC6

25(6)
9(1)

AUTHOR: Vorob'yev, Ye. A., Post Graduate Student

TITLE: Simulating the Manufacturing Errors of SHF Antennas,

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, Vol 3, 1960, Nr 1, pp 115-118 (USSR)

ABSTRACT: The author proposes a method for simulating the manufacturing errors of SHF antennas for determining experimentally the relation between actual production errors and tolerances. It consists in using relatively simple antenna models with intentionally inaccurate component dimensions in compliance with the law of random errors. The inaccuracy of the dimensions is produced during the manufacturing process of the antenna model with high accuracy. The method is checked experimentally using two antenna models working in the 3 cm radio wave range (Figure 1, photograph), one being an ideal model, i.e. manufactured with an accuracy of ± 0.05 mm, the other having intentional dimensional errors with maximum compliance to the Gaussian Law. The results of the experiments showing the characteristics of both antennas are shown in a graph (Figure 2). Comparison of the theoretical

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S/146/60/003/01/016/016
D002/D006

Simulating the Manufacturing Errors of SHF Antennas

cal and experimental results shows that the method is reliable. The article was recommended by the Kafedra radiopriyenykh i radio-peredayushchikh ustroystv (Chair of Radio-Receiving and Radio-Transmitting Devices). There are 1 photograph, 1 graph, and 7 Soviet references.

ASSOCIATION: Leningradskiy institut tochnoy mekhaniki i optiki (Leningrad Institute of Precision Mechanics and Optics)

SUBMITTED: December 12, 1959

Card 2/2

85320

S/142/60/003/004/004/013
E192/E382

9.1800

AUTHOR:

Vorob'yev, Ye.A.

TITLE:

The Problem of the Maximum Possible Gain of Ultrahigh-frequency Antennae 258

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy,
Radiotekhnika, 1960, Vol. 3, No. 4, pp. 471-476

TEXT: The influence of the phase errors in the wave front on the reduction of the gain of highly directional antennae is considered. The evaluation of the reduction in gain of a real directional antenna is carried out under the assumption that the phase front in the antenna aperture can be represented in the form of a steplike phase surface. This is divided into n elements so that the overall theoretical field of the antenna is given by:

$$\bar{F}_T = \sum_{i=1}^{i=n} a_i \cdot e^{j\psi_i} \quad (1)$$

where a_i is the modulus and ψ_i is the phase of a field element. Due to the constructional imperfections of the

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85320

S/142/60/003/004/003/013
E192/E382

The Problem of the Maximum Possible Gain of Ultrahigh-frequency Antennae
antenna elements, phase errors $\Delta\psi_i$ appear in the phase front. The field of the real antenna can thus be represented by:

$$\bar{F}_0 = \sum_{i=1}^{i=n} a_i \cdot e^{j(\psi_i + \Delta\psi_i)} \quad (2)$$

Since the mechanical errors in the antenna (due to the mechanical tolerances) are random, the phase front errors are also random and distributed in accordance with the Gaussian law. The relationship between the tolerance ϵ_{OTH} and the probable mean square phase deviation $\sigma\Delta\psi_i$ can be represented by:

$$\sigma\Delta\psi_i = \frac{2\pi}{x} \cdot \epsilon_{OTH} \quad (3)$$

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S/142/60/003/004/004/013
E192/E382

The Problem of the Maximum Possible Gain of Ultrahigh-frequency Antennae

where x is the probability factor determining the relationship between the given tolerance and the magnitude of the mean square deviation for this tolerance (normally $x = 2.6$). The relationship between the relative tolerance ϵ_{OTH} and the production tolerance is expressed by Eq. (4), where λ is the effective wavelength of the antenna. Eq. (3) can, therefore, be written as Eq. (5). Eq. (2) can be rewritten as Eq. (6) provided $\Delta\psi_1$ are small. Eq. (6) can also be represented as Eq. (8). All the terms of Eq. (8), except the first one, depend on the random variable $\Delta\psi_1$ which obeys the normal distribution law. On the basis of the above formulae it is shown that the reduction in the gain (db) of a real antenna in comparison with a theoretical one, is expressed by:

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The Problem of the Maximum Possible Gain of Ultrahigh-frequency Antennae

$$N_{\text{ocm}}(2.6) = 10 \frac{F_0^2}{F_T^2} = 10 \lg \left[1 - \left(\frac{2\pi}{x} \cdot \epsilon_{\text{OTH}} \right)^2 \right] \quad (9) .$$

The gain of the real antenna can thus be expressed by Eq. (10). This can be rewritten as Eq. (13) in which p is the surface utilization coefficient, K_S is a coefficient dependent on the shape of the antenna aperture; n is defined by Eq. (12), where L is the longest linear dimension of the antenna aperture. Eq. (13) can approximately be written as Eq. (15), where m is defined by Eq. (14). The optimum value of the gain is obtained when n is expressed by Eq. (16). If it is assumed that $x = 2.6$, the optimum value of gain is given by Eq. (17). By investigating the above it is found that the maximum possible gain of ultrahigh-frequency antenna is of the

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Š/142/60/003/004/004/013
E192/E382

The Problem of the Maximum Possible Gain of Ultrahigh-frequency Antennae

order of 70 db; this value is obtained from Eq. (17) for $m = 0.001$. If an attempt is made to obtain higher gains, the difficulties connected with achieving very high mechanical tolerances will become considerable. There are 5 Soviet references.

ASSOCIATION: Kafedra radiopriyemnykh i radiopere dayushchikh ustroystv Leningradskogo instituta tochnoy mekhaniki i optiki (Chair of Radio Receiving and Transmitting Devices of the Leningrad Institute of Precision Mechanics and Optics)

SUBMITTED: June 1, 1959, initially;
September 7, 1959, after revision. X

Card 5/5

5/142/63/006/001/012/015
5192/5382

TITLE: Influence of ohmic losses in long antenna arrays
on their gain

... JAVELIN ...

where α represents a linear loss coefficient. The relative

of the supplied power. An...
...of the... is... substantially attenuate the total

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001860830002-3

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001860830002-3"

ACCESSION NR: AP4029456

6/0108/64/019/004/0017/0018

AUTHOR: Vorob'yev, Ye. A.

TITLE: Effect of nonradiating elements upon the radiation characteristics of pencil-beam antennas

SOURCE: Radiotekhnika, v. 19, no. 4, 1964, 17-18

TOPIC TAGS: antenna, SHF antenna, pencil beam antenna, beam antenna, antenna radiation characteristics

ABSTRACT: Two approximate formulas are developed for the directive gain and the radiation pattern which allow for the presence of a nonradiating element (structural member) in an SHF-antenna aperture. The element is regarded as the source of a special type of phase error; it is assumed that the element does not distort the amplitude-and-phase distribution in other points of the aperture, that it has a counter-phase field, and that the greater linear dimension of the

Cord 1/2

ACCESSION NR: AP4029456

element is comparable with the operating wavelength. Orig. art. has: 6 formulas.

ASSOCIATION: none

SUBMITTED: 26Jun62

DATE ACQ: 30Apr64

ENCL: 00

SUB CODE: EC

NO REF SOV: 002

OTHER: 000

Card 2/2

L 8770-66 EHT(1)/T/FCS(R) WR

ACC NR: AR5018770

SOURCE CODE: UR/0274/65/000/007/A051/A051

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz'. Svodnyy tom, Abs. 7A334

AUTHOR: Vorob'yev, Ye. A. 44

TITLE: Design of multihorn shf pencil-beam antennas 238, 11

CITED SOURCE: Tr. Leningr. in-t aviats. priborostr., vyp. 43, 1964, 111-119

TOPIC TAGS: horn antenna, pencil beam antenna, shf antenna

TRANSLATION: A possibility is considered of designing pencil-beam antennas consisting of a linear array of sectoral horns whose dimensions are small in comparison with a single-horn antenna; a smaller size for the same directional pattern is sought. Formulas are presented for calculating the directional pattern, gain, and directive gain. A linear array of 10 horns with $2\lambda \times 5\lambda$ apertures and 6λ generatrix is considered. The antenna is fed by a waveguide terminated with an absorber and exciting the array horns in series. The efficiency of such a system is 67%. With a directive gain of 1450, the theoretical gain is 900 and the experimental, 880. The directional pattern width is $1^\circ 26''$ and $1^\circ 30''$, and the maximum side-lobe level is 12.4 and 12.5 db, respectively. Bib 5, figs 3, tab. 1.

SUB CODE: 17

jw
Card 1/1

UDC: 621.396.677.493

L 8768-66 EWT(1)/EWT(m)/T/EWP(h)/EWP(t) LJP(c) GG/JD

ACC NR: AR5018774

SOURCE CODE: UR/0274/65/000/007/A084/A084

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz'. Svodnyy tom, Abs. 7A591

AUTHOR: ^{44, 55} Vorob'yev, Ye. A.; ^{44, 55} Shchegolev, V. A.

TITLE: Precision measuring electric parameters of thin dielectric films ⁴² ₄

CITED SOURCE: Tr. Leningr. in-t aviats. priborostr., vyp. 43, 1964, 126-133

TOPIC TAGS: ^{44, 55} dielectric measurement, ^{21, 44, 55} thin film circuit

TRANSLATION: A method is described of measuring ^{21, 44, 55} dielectric constant ϵ , and electrical thickness $t = t_g \sqrt{\epsilon_0} / \lambda_0$ of films, in the shf band ($f = 9600$ Mc); the measurement covers a small spot of the film and does not inflict any mechanical damage to or destruction of the film. Two shf measurement outfits are considered which depend on the effect of the film geometrical thickness t_g upon the phase shift of the signal passing through the film. The results of measurements of various-material films, the instability of operation of individual assemblies, and their errors are discussed. The measurement error of the above outfit was 2--~~3~~ or less.

SUB CODE: 09

jw

Card 1/1

UDC: 621.317.799.029:621.315.61

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz'. Svodnyy tom, Abs. 7A348
SOURCE CODE: UR/0274/65/000/007/A053/A053

AUTHOR: Vorob'yev, Ye. A.⁴⁴; Ivanov, B. P.⁴⁴

TITLE: Experimental investigation of characteristics of the antennas whose aperture modulates in time

CITED SOURCE: Tr. Leningr. in-t aviats. priborostr.⁴⁴, vyp. 43, 1964, 134-139

TOPIC TAGS: antenna, antenna directional pattern, horn antenna

TRANSLATION: The effect of time modulation of size or shape of the antenna aperture upon its directional pattern is considered. If the aperture length is ξ and its variation is $\Delta\xi$, the aperture modulation factor will be $m = \Delta\xi/\xi$. It is shown that the values ξ and $\xi - \Delta\xi$ can be so proportioned that the side lobes for the second dimension will coincide with the zeros of the first dimension. With a time modulation of dimension having a modulation factor m , the average value of the side lobes decreases. A multihorn $65\lambda \times 5\lambda$ antenna was experimentally investigated. The modulation was realized by a periodic shielding of a part of the aperture with a rotating punched disk, which carried an absorbent on its internal side for reducing the antenna mismatch. With $m = 0.3$, the side-lobe level was lower by 2.6 db, but also the antenna directive gain of 400 decreased by 20--25%. The aperture-shape modulation was carried out by means of a round paraboloid of 15λ diameter at whose edge a ring

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UDC: 621.396.67.012.12

L 8543-66

ACC NR: AR5018771

with rectangular projections was rotated. A lobe attenuation of 2--3 db was obtained.
Figs 7.

SUB CODES: 09, 17

Card 2/2

3w

hln

SECRET REL. 000 1-1-1987

AUTHORS: Volob'yan, Ye. A.; Shchegolev, V. A.

... of thin dielectric films

FIKHMAN, V.D.; ASH, M.A.; VOROB'YEV, Ye.A.; PAKSHVER, A.B.

Mechanism of the formation of polyvinyl chloride fibers. Khim.
volok. no.1:28-34 '65. (MIRA 18:2)

1. VNIISV (for Fikhman, Ash, Pakshver). 2. Vsesoyuznyy zaochnyy
institut tekstil'noy i legkoy promyshlennosti (for Vorob'yev).

VOROB'YEV, Yevgeniy Aleksandrovich; KATASHOVA, R.I., red.;
TOLYPINA, O.N., red.; PONOMAREVA, A.A., tekhn. red.

[Methodological problems of measuring and analyzing labor
productivity] Metodologicheskie voprosy izmereniia i ana-
liza proizvoditel'nosti truda. Moskva, Ekonomizdat, 1963.
166 p. (MIRA 17:1)

(Labor productivity)

L 08242-67 EWT(d)/EWT(1)/EWT(m) JD/JAJ

ACC NR: AR6032320

SOURCE CODE: UR/0274/66/000/007/B032/B032

AUTHOR: Vorob'yev, Ye. A.; Kuznetsov, N. A.

30
B

TITLE: Contactless method of measuring distances and small displacements with high accuracy

9m

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz' Abs. 7B205

REF SOURCE: Tr. Leningr. in-t aviats. priborostr., vyp. 45, 1965, 127-130

TOPIC TAGS: measurement, radio engineering, distance measurement

ABSTRACT: A radio engineering method for measuring distances and small displacements for items made of radio-opaque materials. The action principle of the measuring circuit is described, its operation is analyzed, and the results of the experiment carried out on a model are given. [Translation of abstract]

SUB CODE: 09/

Card 1/1

UDC: 621.396.96:621.371

L 22774-66 EWT(1)/EWA(h)

ACC NR: AP6010733

SOURCE CODE: UR/0142/66/009/001/0130/0132

AUTHOR: Vorob'yev, Ye. A.

ORG: none

TITLE: Interferometer for measuring the dielectric constant of dielectrics in the microwave region

SOURCE: IVUZ. Radiotekhnika, v. 9, no. 1, 1966, 130-132

TOPIC TAGS: interferometer, dielectric constant, dielectric material

ABSTRACT: A radio interferometer system developed for measuring the dielectric constant of flat dielectrics in free space in the microwave region ($\lambda = 3-5$ mm) is briefly described. The system can be used both for controlling flat dielectric plates and for measuring the electric thickness of the walls of antenna domes. The klystron generator used in the system is isolated from the transmitting horns of the reference and measuring channels by means of a directional coupler and double waveguide bridges. To establish initial phase-amplitude relationships, a phase shifter is coupled to the reference channel, and an attenuator is included in the measuring channel. The receiving horns of the reference and measuring channels are both mutually decoupled and decoupled with respect to the phase indicator by means of double

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UDC: 621.317.335.029.65

L 22774-66

ACC NR: AP6010733

waveguide bridges. The receiving part of the system is rigidly attached to a movable carriage with an indicator for performing exact readings of displacements of the receiving horns with respect to the fixed transmitting horns. The system is first balanced without the dielectric to achieve equal power in both channels and secure opposite phases of the signals entering the phase indicator. A plate of the dielectric material to be measured is then placed between the horns perpendicular to their axis. Orig. art. has: 2 figures and 1 table.

[JR]

SUB CODE: 09/ SUBM DATE: 15Feb65/ ATD PRESS: 4229

Card 2/2 *dda*

ACC NR: AP6032925

SOURCE CODE: UR/0142/66/009/003/0359/0362

AUTHOR: Vorob'yev, Ye. A.

ORG: none

TITLE: Some criteria of fabricating large-size monolithic radomes

SOURCE: IVUZ. Radiotekhnika, v. 9, no. 3, 1966, 359-362

TOPIC TAGS: radome, aircraft radome

ABSTRACT: Formulas for the maximum radome height (measured in working-wavelength units) as a function of radome-material dielectric constant, for the error associated with radome machining, and for the dielectric-constant-deviation tolerance are derived. The effect of the radome mean-square phase error on the antenna-radiation characteristics can be estimated by well-known methods, and thereby the relations between the radome-machining parameters and the antenna-proper characteristics can be established. It is found that the practical accuracy of modern machining methods does not permit fabrication of large-size half-wave radomes higher than $80 \lambda_0$. Orig. art. has: 1 figure and 16 formulas.

SUB CODE: 09 / SUBM DATE: 16Mar65 / ORIG REF: 002

Card 1/1

UDC: 621.396.677.8

VOROB'YEV, Ye.A.

Johnson's comet (1949 II- 1956 V). Astron. tsir. no.234:2-3
F '63. (MIRA 16:6)

1. Astronomicheskaya observatoriya im. Engel'gardta.
(Comets--1956)

VOROB'YEV, Ye.A.

Measurement indices of labor productivity. Avt.prom. no.3:1-3
Mr '61. (MIRA 14:3)

1. Institut ekonomii AN SSSR.
(Labor productivity)

VOROB'YEV, Ye.A.

Possible identity of Barnard's comet (1884 II) and Johnson's
comet (1949 II and 1956 V). Astron. tsir. no.241:3-4 Ap'63
(MIRA 17:3)

VOROB'YEV, Yevgeniy

Structural steel workers on high buildings. Sov.profsoiuzy 17
no.10:30-36 My '61. (MIRA 14:5)
(Construction workers) (Socialist competition)

VOROB'YEV, Yevgeniy

At high altitudes. Sov.foto 22 no.3:11-13 Mr '62. (MIRA 15:2)
(Electric industry workers)

VOROB'YEV, Yevgeniy.

Salt of the earth. Tekh.mol. 24 no.5:36-38 My '56. (MLBA 9:8)
(Wieliczka, Poland--Salt mines and mining)

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001860830002-3

VOROB'EV, V. D.

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001860830002-3"

VOROB'YEV, Ye.D.

"Uranium-Water Intermediate Reactor Used for Obtaining
High-Intensity Neutron Fluxes" (Paper to be presented at 1958 UN
"Atoms for Peace" Conference, Geneva).

Doklady sovetskikh uchenykh; yadernyye reaktory i yadernaya energetika.
(Reports of Soviet Scientists; Nuclear Reactors and Nuclear Power) Moscow,
Atomizdat, 1959. 707p. trudy vol. 2.

VOROB'YEV, YE. D.

21(1)
AUTHORS: Plesov, G. E., Kleshchikova, V. I., Rodguratskaya, A. E., Vorob'yev, Ye. D., Stolyarov, G. A.
TITLE: Features of High Energies in Cosmic Rays (Moytrony bol'shikh energiy v kosmicheskikh luchakh)
PERIODICAL: Zhurnal teoreticheskoy i eksperimental'noy fiziki, 1959, vol. 36, Pt. 3, pp 727-734 (USSR)

ABSTRACT: In 1945 Plesov and Stolyarov discovered that by cosmic radiation nuclear fission may be caused in the case of uranium and thorium. In the meantime, a number of experimental investigations was carried out for the purpose of determining that cosmic radiation component which is responsible for fission on heavy nuclei. This was also the task to be performed by the present paper. The authors used multi-layer ionization chambers to detect the effect of heavy nuclei fission in cosmic rays. They investigated the altitude dependence of fission in altitudes of 4700, 5600 and 2200 m above sea level (Peaslee, $\lambda = 28^\circ$) and 120 m above sea level ($\lambda = 52^\circ$). Figure 1 shows the calculated and measured dependence of the intensity of the fissioning component on altitude. The curves show a practically linear decrease of fission frequency with

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 Increasing atmospheric density, i.e. fission frequency increases linearly with altitude. Actually, fissions occur rarely, 1 - 2 fissions per 1 g of thorium within 24 hours. Further investigations deal with the angular distribution of the fissioning component. These investigations were carried out at 3600 m above sea level (Peaslee). Measuring results are shown in form of a diagram (Fig. 2) which is compared with the calculated curves. The two curves differ essentially in each other. Further investigations concern the energy and momentum determination of the fissioning component. Results:
 Absorber thickness of range of fissioning component in g/cm² in consideration of the atomic weight of the absorber
 experimental result

Graphite	119 (126)	410±20	130
"	136 (144)	550±100	130
"	177 (180)	340±90	130
"	193 (207)	410±80	130
Aluminum	150 (120)	340±110	170
"	300 (240)	330±85	170

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Features of High Energies in Cosmic Rays
 The values in brackets are obtained if the atomic weight of the absorber is taken into account. In most cases of heavy nuclei fission, the latter is found to be caused by the nucleus component of cosmic radiation. The authors finally thank the staff of the Fizicheskii Institut AN SSSR (Peaslee), with whose assistance the majority of experiments in high altitudes was carried out, and a few further thank Academician I. V. Kurchatov for his interest in this work. There are 3 figures, 1 table, and 7 references, 3 of which are Soviet.

SUBMITTED: September 2, 1959

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